

CLAIMS

What is claimed is:

1 1. A method of interacting with a client process on a mobile device connected to a
2 network over a wireless link, the method comprising the steps of:
3 managing information at a mobile applications server executing on a platform
4 connected to the network, the information including device profile information
5 about the mobile device;
6 receiving from an application first data describing a plurality of graphical elements for
7 display on the mobile device;
8 determining whether the first data exceeds a capacity of the mobile device based on
9 the device profile information; and
10 if it is determined that the first data exceeds the capacity, then
11 forming a subset of the first data that does not exceed the capacity of the
12 mobile device; and
13 sending the subset of the first data to the client process.

1 2. The method of Claim1, wherein:
2 the device profile information includes a form factor describing a number of lines and
3 a number of characters per line of a display component of the mobile device;
4 and
5 the capacity is based on the form factor.

1 3. The method of Claim1, wherein:
2 the device profile information includes a buffer size describing a number of characters
3 the mobile device can receive on input without loss of input data; and
4 the capacity is based on the buffer size.

1 4. The method of Claim1, wherein:
2 the first data indicates that a particular graphical element of the plurality of graphical
3 elements is current; and

4 the subset includes the particular graphical element.

1 5. The method of Claim1, the step of managing the information at the mobile
2 applications server further comprising:

3 requesting the device profile information from the mobile device;
4 receiving the profile information from the mobile device; and
5 storing the device profile information.

1 6. The method of Claim1, the step of managing the information at the mobile
2 applications server further comprising:

3 receiving a request for service from the mobile device;
4 determining a mobile device type from the request for service; and
5 retrieving the device profile information from a database based on the device type.

1 7. A method of interacting with a client process on a mobile device connected to a
2 network over a wireless link, the method comprising the steps of:

3 managing information at a mobile applications server executing on a platform
4 connected to the network, the information including data indicating a
5 particular data format for communicating with the mobile device;
6 receiving first data including a first description of a graphical element for display on
7 the mobile device, the first description using a first format different than the
8 particular format;
9 determining whether an external converter converts from the first description to a
10 second description using the particular format; and
11 if it is determined that the external converter does not convert to the second
12 description using the particular format, then
13 converting the first description into the second description using the particular
14 format, and
15 sending second data including the second description to the client process.

1 8. The method of claim 7, further comprising, if it is determined that the external
2 converter converts to the second description using the particular format, then sending the first
3 data to the external converter.

1 9. The method of claim 7, wherein the particular format is the Telnet protocol.

1 10. The method of claim 7, wherein the first format is a common markup language.

1 11. The method of claim 7, wherein the first format is an extensible markup language
2 (XML).

1 12. The method of claim 11, the step of converting further comprising applying an
2 extensible stylesheet language (XSL) translator to the first description to produce the second
3 description.

1 13. The method of claim 7, said step of determining further comprising determining that
2 the external converter converts first data in an extensible markup language (XML) to produce
3 the second description in at least one of a hypertext markup language (HTML) format, a
4 handheld device markup language (HDML) format, a wireless markup language (WAP)
5 format, and a voice markup language (VoxML) format.

1 14. A computer-readable medium carrying instructions for interacting with a client
2 process on a mobile device connected to a network over a wireless link, the computer-
3 readable medium comprising instructions for causing one or more processors to perform the
4 steps of:
5 managing information including device profile information about the mobile device;
6 receiving from an application first data describing a plurality of graphical elements for
7 display on the mobile device;
8 determining whether the first data exceeds a capacity of the mobile device based on
9 the device profile information; and

10 if it is determined that the first data exceeds the capacity, then
11 forming a subset of the first data that does not exceed the capacity of the
12 mobile device; and
13 sending the subset of the first data to the client process over the network.

1 15. The computer-readable medium of Claim14, wherein:
2 the device profile information includes a form factor describing a number of lines and
3 a number of characters per line of a display component of the mobile device;
4 and
5 the capacity is based on the form factor.

1 16. The computer-readable medium of Claim14, wherein:
2 the device profile information includes a buffer size describing a number of characters
3 the mobile device can receive on input without loss of input data; and
4 the capacity is based on the buffer size.

1 17. The computer-readable medium of Claim14, wherein:
2 the first data indicates that a particular graphical element of the plurality of graphical
3 elements is current; and
4 the subset includes the particular graphical element.

1 18. The computer-readable medium of Claim14, the step of managing the information at
2 the mobile applications server further comprising:
3 requesting the device profile information from the mobile device;
4 receiving the profile information from the mobile device; and
5 storing the device profile information.

1 19. The computer-readable medium of Claim14, the step of managing the information at
2 the mobile applications server further comprising:
3 receiving a request for service from the mobile device;
4 determining a mobile device type from the request for service; and

5 retrieving the device profile information from a database based on the device type.

1 20. A computer-readable medium carrying instructions for interacting with a client
2 process on a mobile device connected to a network over a wireless link, the computer-
3 readable medium comprising instructions for causing one or more processors to perform the
4 steps of:

5 managing information including data indicating a particular data format for
6 communicating with the mobile device;
7 receiving first data including a first description of a graphical element for display on
8 the mobile device, the first description using a first format different than the
9 particular format;
10 determining whether an external converter converts from the first description to a
11 second description using the particular format; and
12 if it is determined that the external converter does not convert to the second
13 description using the particular format, then
14 converting the first description into the second description using the particular
15 format, and
16 sending second data including the second description to the client process over
17 the network.

1 21. The computer-readable medium of claim 20, further comprising, if it is determined
2 that the external converter converts to the second description using the particular format, then
3 sending the first data to the external converter.

1 22. The computer-readable medium of claim 20, wherein the particular format is the
2 Telnet protocol.

1 23. The computer-readable medium of claim 20, wherein the first format is a common
2 markup language.

1 24. The computer-readable medium of claim 20, wherein the first format is an extensible
2 markup language (XML).

1 25. The computer-readable medium of claim 24, the step of converting further comprising
2 applying an extensible stylesheet language (XSL) translator to the first description to produce
3 the second description.

1 26. The computer-readable medium of claim 20, said step of determining further
2 comprising determining that the external converter converts first data in an extensible markup
3 language (XML) to produce the second description in at least one of a hypertext markup
4 language (HTML) format, a handheld device markup language (HDML) format, a wireless
5 markup language (WAP) format, and a voice markup language (VoxML) format.